

# A REVISED CHECKLIST OF THE MOSQUITOES OF GUATEMALA INCLUDING A NEW COUNTRY RECORD, *PSOROPHORA CYANESCENS*

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**ABSTRACT.** A newly erected genus, *Isostomyia*, a recently described subgenus, *Phenacomyia*, of *Culex*, and 15 species have been added to the mosquito fauna of Guatemala since the last checklist was published by Clark-Gil and Darsie (1983); therefore a revised list is included. One of the additions is *Psorophora cyanescens*, a new country record for Guatemala. Its presence in Mexico and Central America is reviewed.

## INTRODUCTION

A monograph on the mosquitoes of Guatemala was published by Clark-Gil and Darsie in 1983, reporting 124 species of mosquitoes and 3 undescribed species in the genus *Shannoniana* Lane and Cerqueira. Since then 15 species have been added for a total of 139, discounting the undescribed taxa. Also a newly erected genus, *Isostomyia* Coquillett (Harbach and Peyton 1993), formerly a subgenus under *Runchomyia*, and a newly described subgenus in *Culex*, *Phenacomyia* Harbach and Peyton (1992), represented by 2 species in Guatemala, have been included in the checklist.

The 15 species that represent the increase in the Guatemala mosquito fauna are as follows, chronologically: *Culex carcinophilus* Dyar and Knab and *Culex inhibitor* Dyar and Knab (Martini 1935); *Culex spissipes* (Theobald) and *Culex theobaldi* (Darsie and Hobbs 1982, as *Cx. chrysotomum* Dyar and Knab); *Psorophora cingulata* (Fabricius) and *Uranotaenia apicalis* Theobald (Darsie 1983); *Psorophora ciliipes* (Fabricius) (Darsie 1984); *Culex restuans* Theobald (Strickman and Darsie 1988); *Culex pseudostigmatosoma* Strickman (Strickman 1990); *Culex lactator* Dyar and Knab (Strickman and Pratt 1989); *Anopheles neomaculipalpus* Curry (Dix et al. 1991); *Culex elevator* Dyar and Knab; *Culex flabellifer* Komp; and *Culex serratimarge* Root (Pecor et al. 1992).

The last species is *Psorophora (Janthinosoma) cyanescens* (Coquillett), which is being reported as a new country record for Guatemala. I have 2 females collected in Aldea La Palmilla, Musatlan, Department of Zacapa, VI-26-88, by Victor Molina. Knight and Stone (1977) presented a disjunct distribution for this species. They recorded it from the United States (Darsie and Ward [1981] listed it in 23 states), 6 South American countries, and Trinidad, but did not mention Mexico and Central America. However, Vargas (1956) reported it from 10 states in Mex-

ico and Heinemann and Belkin (1977) found it in Pantano El Esparta, El Tamarindo, Puerto Somosa (now known as Puerto Sandino), Department of Leon, Nicaragua, VI-18-64. The latter 2 records were apparently omitted from the Knight and Stone catalog.

## REVISED CHECKLIST OF THE MOSQUITOES OF GUATEMALA

The above records are incorporated in the following checklist of 139 mosquito taxa now known to occur in Guatemala, revised from that given by Clark-Gil and Darsie (1983).

### *AEDEOMYIA* Theobald

Subgen. *Aedeomyia* Theobald  
*squamipennis* (Lynch Arribalzaga)

### *AEDES* Meigen

Subgen. *Aedimorphus* Theobald  
 *vexans* Meigen

Subgen. *Howardina* Theobald  
*allotecnon* Kumm, Komp and Ruiz  
*guatemala* Berlin  
*guerrero* Berlin  
*quadrivittatus* (Coquillett)

Subgen. *Ochlerotatus* Lynch Arribalzaga  
*angustivittatus* Dyar and Knab  
*epactius* Dyar and Knab  
*euplocamus* Dyar and Knab  
*fulvus* (Wiedemann)

*hastatus* Dyar

*scapularis* (Rondani)

*serratus* (Theobald)

*taeniorhynchus* (Wiedemann)

*tomentor* Dyar and Knab

Subgen. *Protomacleaya* Theobald

*daryi* Schick

*homeopus* Dyar

*impostor* Schick

*insolitus* (Coquillett)

*podographicus* Dyar and Knab

*sandrae* Zavortink

- Subgen. *Stegomyia* Theobald  
*aegypti* (Linnaeus)
- ANOPHELES** Meigen
- Subgen. *Anopheles* Meigen  
*apicimacula* Dyar and Knab  
*crucians* Wiedemann  
*eiseni* Coquillett  
*gabaldoni* Vargas  
*hectoris* Giaquinto-Mira  
*intermedius* Peryassu  
*neomaculipalpus* Curry  
*parapunctipennis* guatemalensis DeLeón  
*pseudopunctipennis* Theobald  
*punctimacula* Dyar and Knab  
*vestitipennis* Dyar and Knab  
*xelajuensis* DeLeón
- Subgen. *Kerteszia* Theobald  
*neivai* Howard, Dyar and Knab
- Subgen. *Nyssorhynchus* Blanchard  
*albimanus* Wiedmann  
*argyritarsis* Robineau-Desvoidy  
*darlingi* Root  
*marajoara* Galvao and Damasceno  
*strodei* Root
- CHAGASIA** Cruz  
*bathana* (Dyar)
- COQUILLETIDIA** Dyar
- Subgen. *Rhynchotaenia* Brethes  
*nigricans* (Coquillett)  
*venezuelensis* (Theobald)
- CULEX** Linnaeus
- Subgen. *Anoediopora* Dyar  
*conservator* Dyar and Knab  
*restrictor* Dyar and Knab
- Subgen. *Carrollia* Lutz  
*bihaina* Dyar and Nuñez-Tovar  
*metempsytus* Dyar
- Subgen. *Culex* Linnaeus  
*chidesteri* Dyar  
*coronator* Dyar and Knab  
*declarator* Dyar and Knab  
*inflictus* Theobald  
*interrogator* Dyar and Knab  
*mollis* Dyar and Knab  
*nigripalpus* Theobald  
*ousqua* Dyar  
*pinarocampa* Dyar and Knab  
*quinquefasciatus* Say  
*pseudostigmatosoma* Strickman  
*restuans* Theobald  
*stenolepis* Dyar and Knab  
*stigmatosoma* Dyar  
*thriambus* Dyar  
*usquatus* Dyar
- Subgen. *Lutzia* Theobald  
*bigoti* Bellardi
- Subgen. *Melanoconion* Theobald  
*bastagarius* Theobald  
*carcinophilus* Dyar and Knab
- conspirator* Dyar and Knab  
*eastor* Dyar  
*educator* Dyar and Knab  
*elevator* Dyar and Knab  
*erraticus* (Dyar and Knab)  
*flabellifer* Komp  
*inhibitor* Dyar and Knab  
*iolambdus* Dyar  
*panocossa* Dyar  
*paracrybda* Komp  
*pedroi* Sirivanakarn and Belkin  
*pilosus* (Dyar and Knab)  
*sardinerae* Fox  
*serratimarge* Root  
*spissipes* (Theobald)  
*taeniopus* Dyar and Knab  
*theobaldi* (Lutz)  
*trifidus* Dyar
- Subgen. *Micraedes* Coquillett  
*erethyzonfer* Galindo and Blanton
- Subgen. *Neoculex* Dyar  
*derivator* Dyar and Knab
- Subgen. *Phenacomyia* Harbach and Peyton  
*corniger* Theobald  
*lactator* Dyar and Knab
- CULISETA** Felt
- Subgen. *Culiseta* Felt  
*particeps* (Adams)
- DEINOCERITES** Theobald  
*belkini* Adames  
*cancer* Theobald  
*epitedeus* (Knab)  
*pseudes* Dyar and Knab
- HAEMAGOGUS** Williston
- Subgen. *Haemagogus* Williston  
*aeritinctus* Galindo and Trapido  
*anastasianus* Dyar  
*equinus* Theobald  
*mesodentatus* Komp and Kumm  
*regalis* Dyar and Knab
- ISOSTOMYIA** Coquillett  
*espini* Martini
- JOHNBELKINIA** Zavortink  
*ulopus* (Dyar and Knab)
- LIMATUS** Theobald  
*durhamii* Theobald
- MANSONIA** Blanchard
- Subgen. *Mansonia* Blanchard  
*dyari* Belkin, Heinemann and Page  
*titillans* (Walker)
- ORTHOPODOMYIA** Theobald  
*kummi* Edwards
- PSOROPHORA** Robineau-Desvoidy
- Subgen. *Grabhamia* Theobald  
*cingulata* (Fabricius)  
*confinnis* (Lynch Arribalzaga)
- Subgen. *Janthinosoma* Lynch Arribalzaga  
*albipes* (Theobald)  
*champerico* (Dyar and Knab)

- cyanescens* (Coquillett)  
*ferox* (Von Humboldt)  
*lutzii* (Theobald)  
*varipes* (Coquillett)
- Subgen. *Psorophora* Robineau-Desvoidy  
*ciliata* (Fabricius)  
*cilipes* (Fabricius)  
*howardii* Coquillett
- RUNCHOMYIA* Theobald  
 Subgen. *Ctenogoeldia* Edwards  
*magna* (Theobald)
- SABETHES* Robineau-Desvoidy  
 Subgen. *Sabethes* Robineau-Desvoidy  
*cyaneus* (Fabricius)  
*tarsopus* Dyar and Knab
- Subgen. *Sabethoides* Theobald  
*chloropterus* (Von Humboldt)
- SHANNONIANA* Lane and Cerqueira  
*moralesi* (Dyar and Knab)
- TOXORHYNCHITES* Theobald  
 Subgen. *Lynchiella* Lahille  
*grandiosus* (Williston)  
*haemorrhoidalis superbus* (Dyar and Knab)  
*theobaldi* (Dyar and Knab)
- TRICHOPROSOPON* Theobald  
*digitatum* (Rondani)
- URANOTAENIA* Lynch Arribalzaga  
 Subgen. *Uranotaenia* Lynch Arribalzaga  
*apicalis* Theobald  
*coatzacoalcos* Dyar and Knab  
*geometrica* Theobald  
*lowii* Theobald  
*orthodoxa* Dyar  
*pulcherrima* Lynch Arribalzaga  
*socialis* Theobald
- WYEOMYIA* Theobald  
 Subgen. *Dendromyia* Theobald  
*aporonoma* Dyar and Knab  
*chalcocephala* Dyar and Knab  
*pseudepecten* Dyar and Knab
- Subgen. *Wyeomyia* Theobald  
*abebeba* Dyar and Knab  
*arthrostigma* (Lutz)  
*celaenocephala* Dyar and Knab  
*guatemala* Dyar and Knab  
*melanopus* Dyar

#### COMMENTS ON SOME SPECIES IN THE CHECKLIST

*Culex (Melanoconion)*: The recent catalog of this subgenus (Pecor et al. 1992) greatly expanded our knowledge of the distribution of the group. From their data an additional 5 species have been added to the Guatemala list. Three species, *Cx. elevator*, *Cx. flabellator*, and *Cx. serratimarge*, were collected by J. P. Duret and were a part of his collection now housed in the U.S.

National Museum of Natural History, Smithsonian Institution. The other 2, *Cx. carcinophilus* and *Cx. inhibitor*, were recorded from Guatemala by Martini (1935) and were inadvertently omitted by Clark-Gil and Darsie (1983).

*Culex (Phenacomyia)*: This subgenus was erected for 3 species, *Cx. corniger*, *Cx. lactator*, and *Cx. airozai* Lane, that have the most distinctive larvae of all Neotropical *Culex*. Strickman and Pratt (1989) raised *Cx. lactator* from synonymy with *Cx. corniger*.

*Anopheles marajoara*: *An. allopha* (Peryassu) was the name previously used for the Guatemala representative of the *An. albitalensis* Lynch Arribalzaga complex. However, Linthicum (1988) changed the name to *An. marajoara*, explaining that no holotype for *allopha* exists, so that name is a *nomen dubium*. Although I am retaining the name, *marajoara*, the whole complex is in transition (Rosa-Freitas et al. 1990) and further study will probably change present concepts.

*Culex stigmatosoma* and *Culex thriambus*: Strickman (1988) examined the holotype of *Cx. peus* Speiser and found it to be conspecific with *Cx. thriambus*. Therefore *Cx. thriambus* had to be called *Cx. peus* and the former *Cx. peus* required a new name. Consequently *Cx. stigmatosoma* was resurrected from synonymy with the former *Cx. peus* to become that new name. Some workers were displeased with the loss of the name *Cx. thriambus* because the species had been known by that name for 67 years and it was used in many scientific publications. Furthermore, renaming *Cx. thriambus* as *Cx. peus*, a name which had already been known for another species, added to the confusion. Preservation of the name, *Cx. thriambus*, was appealed to the International Commission on Zoological Nomenclature (Eldridge and Harbach 1989), which solicitation was adjudicated in favor of retaining the names *thriambus* and *stigmatosoma* (Eldridge and Harbach 1992).

*Culex theobaldi*: The species, *Cx. chrysonotum*, was recorded from Guatemala by Darsie and Hobbs (1982). A taxonomic study of the species related to *Cx. theobaldi* by Forattini and Sallum (1989) resulted in the relegation of *chrysonotum* to synonymy with *theobaldi*.

*Sabethes tarsopus*: Harbach and Petersen (1992) described a new species, *Sa. gymnothorax*, which is related to *Sa. tarsopus*. Because they recorded it from Mexico and Belize, it is quite possible that it occurs in Guatemala. However, it is yet to be confirmed.

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